

# **Inquiry-based Teaching and Learning**

“The aim of the educational process inside schools is not to finish something, but to start something. It is not to cover the curriculum, but to uncover it.” (E.Eisner)

# CHALLENGES

Today you will choose a challenge. These challenges are shortened examples of actual inquiry-based lessons I have used over the years with my students. You will have approximately 10 minutes to work with the challenge.

In Challenge #1 you will be exploring artifacts.

In Challenge #2 you will be exploring a math concept.

In Challenge #3 you will be analyzing works of art.

# **Guiding Questions**

During each challenge keep the following essential questions on your "back burner".

When we gather back as a group, be prepared to share your ideas, questions and comments.

1. What is the role of the student?
2. What is the role of the teacher?
3. What skills are practiced in these lessons?
4. What types of learning are used in these lessons?
5. How does this type of learning prepare a student for the future?

***What does all of this  
mean?***

# Definitions According to Webster and Wordsmyth

## ***INQUIRY***

- 1 examination into facts or [principles](#) : [research](#)
- 2 a request for information
- 3 a [systematic](#) investigation often of a matter of public interest
4. a process of seeking truth

Synonyms:

[exploration](#), [analysis](#), [examination](#), [investigation](#), [quest](#), [questioning](#), [research](#), [search](#), [study](#)

# **Brief History**

Herbert Spencer (1820 - 1903) developed a theory based on the premise that students should directly contact nature, observe natural objects and then form their own conclusion (object-centered instruction). □



John Dewey (1909) supported project learning and said that learning must include the process aspect, not just the information aspect.

Dewey believed that inductive thinking, free from the interpretation and pressure of others was the best learning environment.

Founded the Laboratory Schools which are part of the University of Chicago.

Most often the inquiry-based teaching and learning model is associated with science.

**However,** it is an effective model for all subjects that places learning into the hands of the learner. It naturally allows for the integration of subjects and scaffolding in the learning experience. Problem-based learning and project-based learning are examples of 2 tools for structuring inquiry-based lessons (in my opinion : )

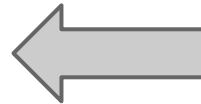
Think about  
the Problem/Define  
a Curiosity



Plan the  
Method



Collect  
“Data”



**Negotiate & Debate  
Conclusions**



Consider the  
Implications



**Report Results**

# Ending Thoughts

*I want my children to understand the world, but not just because the world is fascinating and the human mind is curious. I want them to understand it so that they will be positioned to make it a better place. Knowledge is not the same as morality, but **we need to understand if we are to avoid past mistakes and move in productive directions.** **An important part of that understanding is knowing who we are and what we can do...** **Ultimately, we must synthesize our understandings for ourselves.** (Howard Gardner, 1999)*

Ultimately, through inquiry-based teaching and learning, we strive to create:

- a. “an environment rich with opportunities that evoke confusion & questioning” (and) which opens the doors for “cognitive restructuring, (i.e. changing one’s mind)” and where students “own their learning” and know how to learn;
- b. a student population filled with intrinsically motivated, life-long learners; and
- c. a student mindset that is comfortable knowing that there should be more questions than answers.

## Sources:

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Dewey, John. Art As Experience,

Eisner, Elliott. Arts and the Creation of the Mind,

Smith, Mark K. (2002, 2008) 'Howard Gardner and multiple intelligences', *the encyclopedia of informal education*, <http://www.infed.org/mobi/howard-gardner-multiple-intelligences-and-education..>